

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:

image forming stations arranged
along a sheet transport path, each having an image carrier;

a transfer/transport belt for holding and
transporting downstream in a sheet transport direction a
sheet for an image to be formed thereon by the image
forming stations;

transfer electrodes in contact through the
transfer/transport belt with the image carriers provided in
the image forming stations; and

a voltage applying device for applying a voltage
to the transfer electrodes,

wherein the voltage applying device, when a transfer
process is not performed, applies a non-transfer bias
voltage to only the transfer electrode in contact with the
image carrier, the non-transfer bias voltage having the
same polarity as transfer bias voltage and being lower than
a transfer bias voltage.

2. An image forming apparatus according to claim 1,

wherein the voltage applying device applies a higher
non-transfer bias voltage to a first transfer electrode
positioned upstream with reference to the sheet transport
direction than to the other transfer electrodes.

3. An image forming apparatus according to claim 1,

wherein the non-transfer bias voltage is increased as an electric potential of the image carriers increases.

4. An image forming apparatus according to claim 1, further comprising a sensor for detecting temperature and humidity around the transfer/transport belt,

wherein the voltage applying device adjusts the non-transfer bias voltage in accordance with the detection result of the sensor.

5. An image forming apparatus according to claim 1,

wherein the voltage applying device applies an increased non-transfer bias voltage to the transfer electrodes as rotational speed of the image carriers increases.